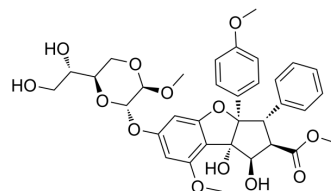


## Episilvestrol

Cat. No.:	HY-15359		
CAS No.:	697235-39-5		
Molecular Formula:	C <sub>34</sub> H <sub>38</sub> O <sub>13</sub>		
Molecular Weight:	654.66		
Target:	Eukaryotic Initiation Factor (eIF); Autophagy		
Pathway:	Cell Cycle/DNA Damage; Autophagy		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 25 mg/mL (38.19 mM; Need ultrasonic)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.5275 mL	7.6376 mL	15.2751 mL
	5 mM	0.3055 mL	1.5275 mL	3.0550 mL
	10 mM	0.1528 mL	0.7638 mL	1.5275 mL

Please refer to the solubility information to select the appropriate solvent.

### BIOLOGICAL ACTIVITY

#### Description

Episilvestrol is a derivative of silvestrol, isolated from the fruits and twigs of *Aglaia perviridis*, and is a specific eIF4A-targeting translation inhibitor, with antitumor activity.

#### IC<sub>50</sub> & Target

eIF4

#### In Vitro

Episilvestrol is a specific eIF4A-targeting translation inhibitor, with antitumor activity<sup>[1]</sup>. Episilvestrol is cytotoxic activity against several human cancer cell lines, such as Lu1, LNCaP, MCF-7 and HUVEC cells, with ED<sub>50</sub>s of 3.8, 3.8, 5.5 and 15.3 nM, respectively<sup>[2]</sup>. The GI<sub>50</sub>s of Episilvestrol against the cell proliferation<sup>[2]</sup> of NCI-H460 and MCF-7 cells are 17.96 nM and 17.96 nM after first test and 15.6 nM and 18.7 nM after 2 months via SRB assay. Episilvestrol also suppresses HK1 cells and EBV-positive C666.1 NPC cells<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### PROTOCOL

### Cell Assay [3]

A total of  $1 \times 10^4$  HK1 cells/well or  $3 \times 10^4$  C666.1 cells/well are seeded into 96-multiwell microtiter plates. At 24 h following seeding, the medium is aspirated and replaced with fresh medium containing various concentrations of silvestrol or Episilvestrol. Vehicle control cultures receive DMSO alone. The cells are then incubated for 24 h at 37°C in an atmosphere containing 5% CO<sub>2</sub>. The number of viable cells at the end of the incubation period is measured using MTS assay. Absorbance at 490 nm is read and subtracted with non-specific absorbance measured at 630 nm. Wells containing medium without cells serve as blanks. Cell viability is calculated as a percentage compared to the control cells, which are arbitrarily assigned 100% viability. The half maximal inhibitory concentration (IC<sub>50</sub>) values are graphically obtained from the dose-response curves<sup>[3]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### REFERENCES

- [1]. Chambers JM, et al. Synthesis of biotinylated episilvestrol: highly selective targeting of the translation factors eIF4A/II. *Org Lett.* 2013 Mar 15;15(6):1406-9.
- [2]. Hwang BY, et al. Silvestrol and episilvestrol, potential anticancer rocaglate derivatives from *Aglaia silvestris*. *J Org Chem.* 2004 May 14;69(10):3350-8.
- [3]. Daker M, et al. Inhibition of nasopharyngeal carcinoma cell proliferation and synergism of cisplatin with silvestrol and episilvestrol isolated from *Aglaia stellatopilosa*. *Exp Ther Med.* 2016 Jun;11(6):2117-2126. Epub 2016 Mar 29.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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